

# Interocclusal Records

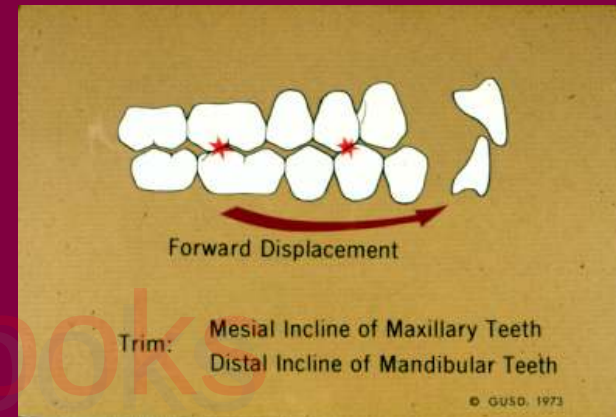


# I. Diagnostic Casts



## A. Diagnostic CR Casts

- Most patients have a slight discrepancy between tooth contact in CR and IP
- Therefore the CR record is made at an open vertical to eliminate the tendency for the patient to posture towards IP with tooth contact



# 1. Wax interocclusal record

- Wax begins to set up immediately as it cools, therefore helps to stabilize jaw at open vertical dimension
- A stiff, brittle wax required to prevent distortion during mounting procedure



## 2. Anterior deprogrammer

- Deprograms neuromuscular system
- Provides vertical stop for record, allows passive, low resistance materials
- Controls vertical dimension of the record



## B. Diagnostic IP Casts

*Walls AWG et al., J Oral Rehabil 1991;18:43-48*

- Record at tooth contact/ VDO
- 70% most accurately through hand articulation



## B. Diagnostic IP Casts

*Walls AWG et al., J Oral Rehabil 1991;18:43-48*

- 30% need registration material w little resistance to closure,  
*E.g.* addition silicone



## II. Working Casts





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- Record at the Vertical Dimension of Occlusion
- If CR treatment position, new IP first in CR (occlusal adjustment). Then mount cast in new IP at VDO.
- Exception: final remount complete dentures

## II. Working Casts

### A. Hand-Articulated:

IF unprepared teeth provide a stable IP

### B. Registration Material Placement:

> record stability needed, add only over prepared teeth

### C. Closed Mouth

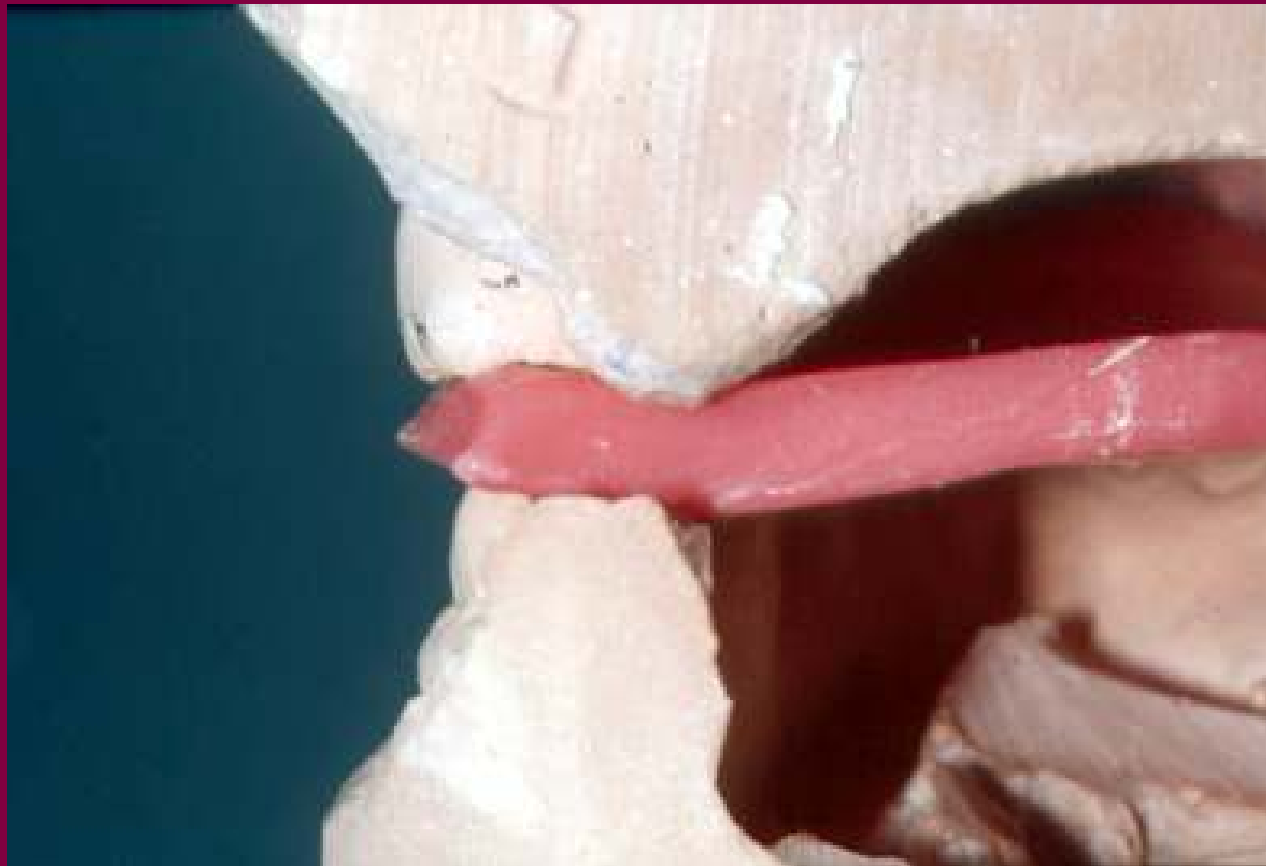
**Record:** Have patient close into IP, then inject material over prepared teeth.



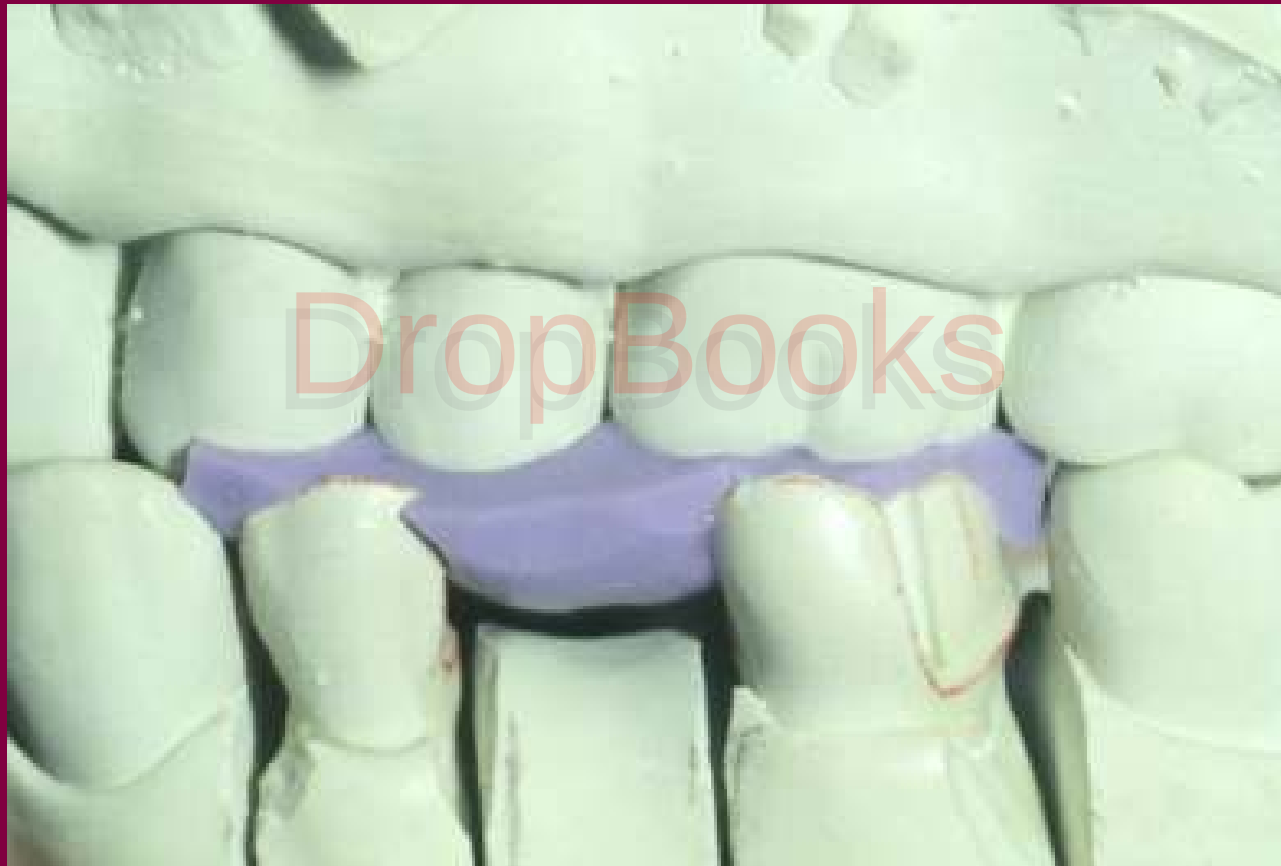
### **III. Interocclusal Records: KEEP IN MIND!**



## **A. NO soft tissue contact**



## **B. Trim record to sit passively on casts**



## C. “Arc of Closure”

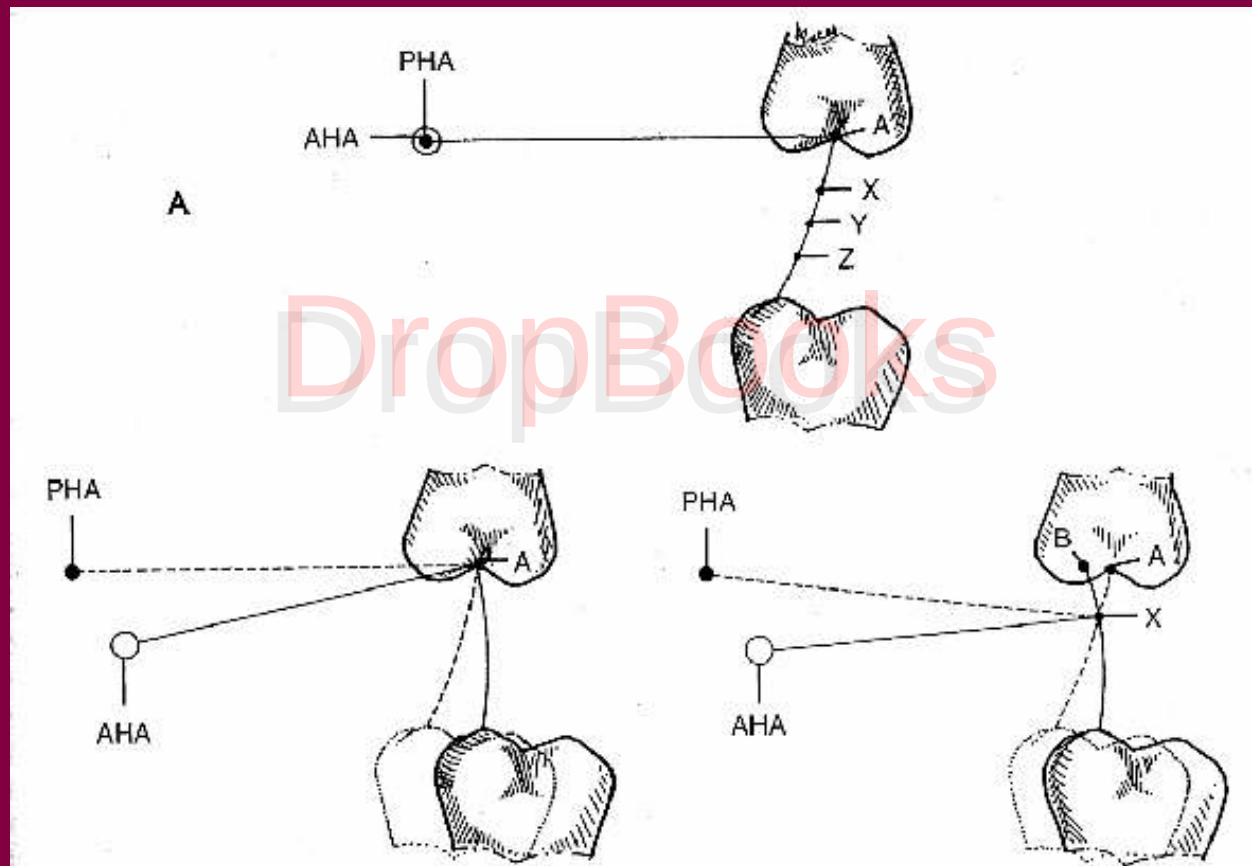


- **Hinge Axis Locator:**  
allows a “hinge axis”  
facebow transfer, which  
duplicates the patients arc  
of opening & closing



- **Arbitrary Facebow:**  
orients the axis based on  
anatomic landmarks  
resulting in a discrepancy  
between the patient's and  
the articulator's arc of  
opening & closing

## C. Minimize “Arc of Closure Error”



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Working cast  
always mount at  
the vertical  
dimension of  
occlusion (VDO)





## C. Minimize “Arc of Closure Error”

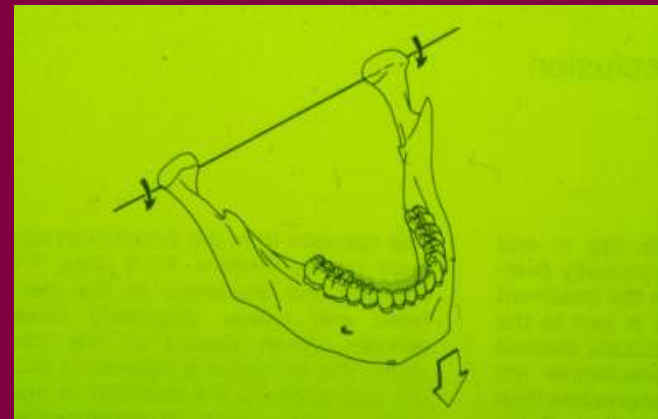
Exception:

Complete denture  
records and  
remounts



# Centric Relation

- **Typodont** with no “rock” of teeth in hinged position
- Patient “hinged position” is called **Centric Relation** which is determined by the horizontal axis of the TM jts.



# **CENTRIC RELATION: Bimanual Clinical Method**



# CR Clinical Technique: Bimanual Guidance

- A cooperative effort between the patient and the clinician
- “Slow and deliberate”
- Begin with light pressure on the mandible.



**A. Position of Clinician:** Directly behind the patient's head



## **B. Position of Patient:**

1. Chair back parallel with the floor



## **B. Position of Patient:**

2. Chin point raised/ Neck extended



## C. Hand position:

1. Fingers lower border of the mandible, 5th finger on ascending ramus





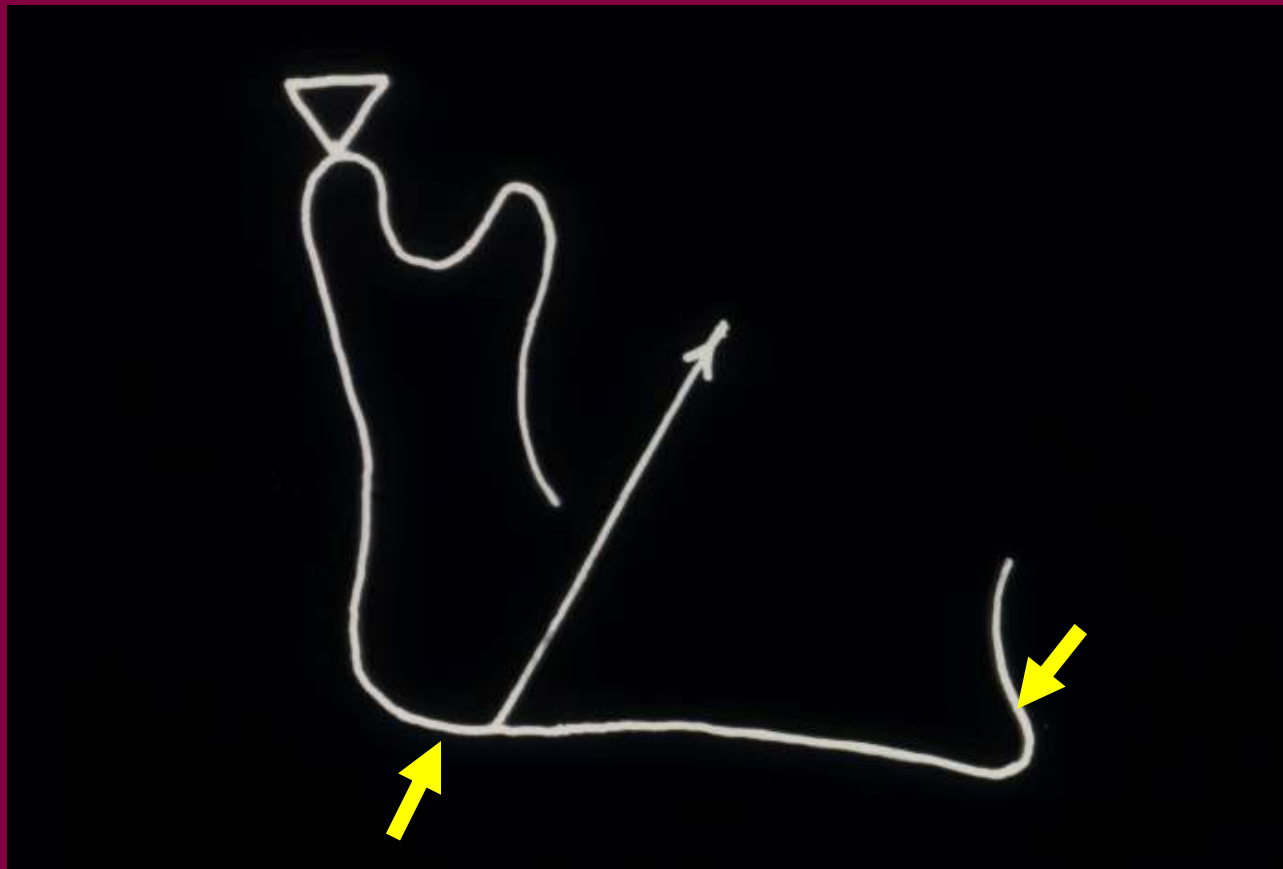
## C. Hand position:

2. Thumbs at symphysis of mandible,  
Hand in “C-Shape” cradling the jaw



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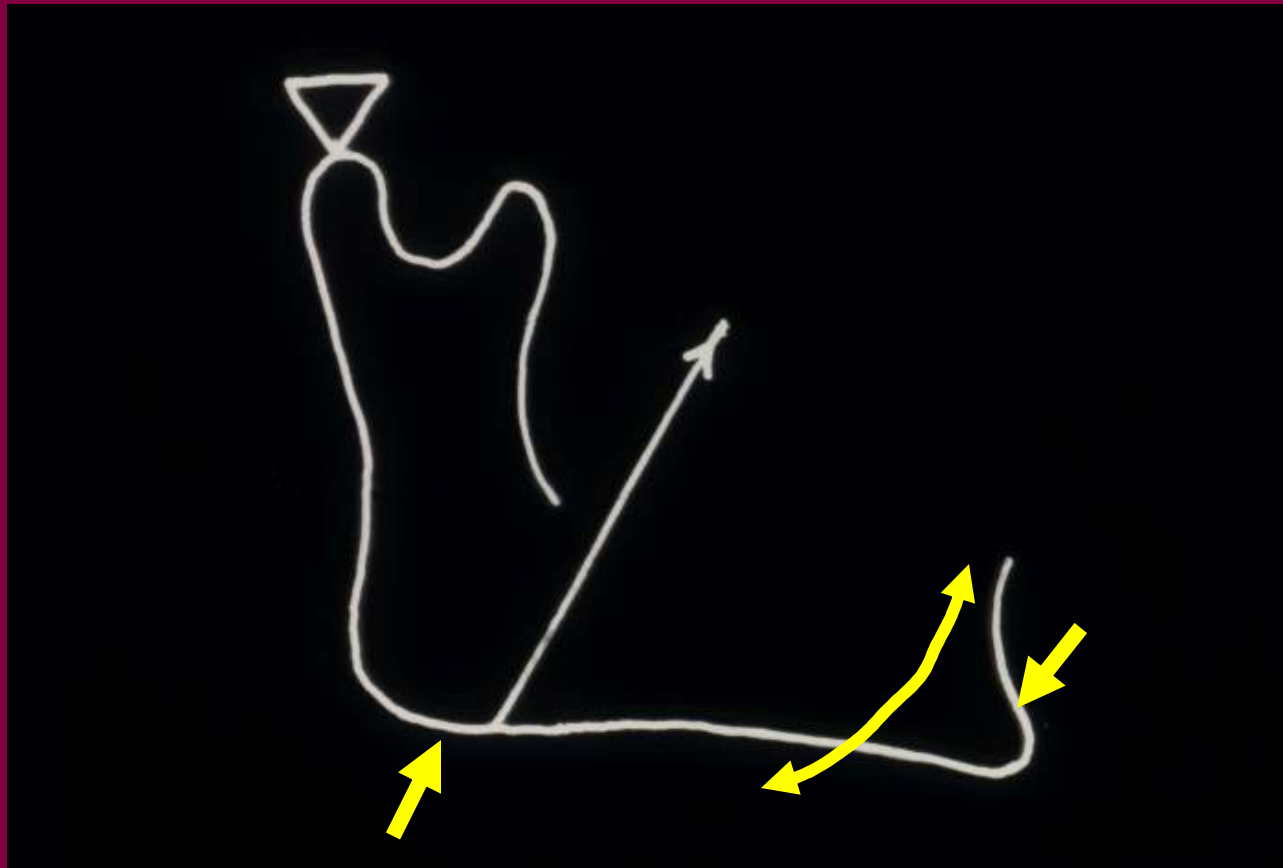
2. Force application, slowly increase during opening & closing to verify CR position



**D. Rotation from the elbows, wrists fixed:**  
SLOW AND DELIBERATE,  
a cooperative effort!



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SLOW AND DELIBERATE,  
a cooperative effort!



## II. Repeatability

This method has shown greater reliability than other methods of recording centric relation.

- Kantor ME, *et al.*: JPD 1975
- Hobo S, Iwata T: JPD 1985
- McKee JR: JPD 1997



# III. Clinical Recording



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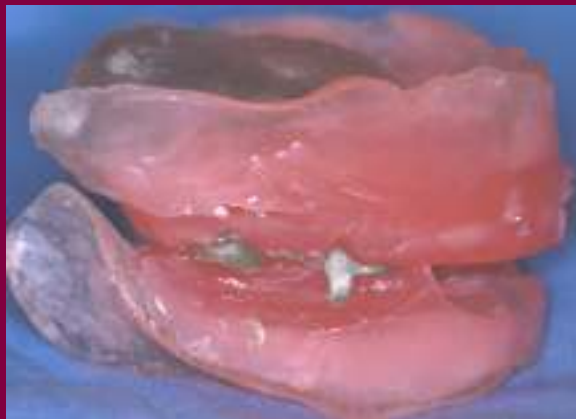
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## IV. CR Recording with Complete Dentures



- A. Need to stabilize the trial or denture bases, therefore can not use bimanual method
- B. Minimal thickness record without perforation, to prevent shift of trial or denture base



Thank you!

In the field of observation chance favors  
only the prepared mind.

*Louis Pasteur*

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